## AMENDMENTS TO THE SPECIFICATION

Please amend the specification as follows:

**Amend paragraph [0017] beginning on page 6 as follows:**

[0017]

A. Design method for industrial products using a clothoid curve:

Hereinafter, the invention according to a method for designing industrial products using the clothoid curve ~~described in claims 1-10~~ will now be described.

**Amend paragraph [0018] beginning on page 7 as follows:**

[0018]

The invention ~~in claim 1~~ solves the foregoing problems by employing the method for designing industrial products, wherein the design method is characterized in that the shape of an industrial product is designed by using a three-dimensional curve (referred to as a three-dimensional clothoid curve) in which each of a pitch angle and a yaw angle in a tangential direction is given by a quadratic expression of a curve length or a curve length variable.

**Amend paragraph [0019] beginning on page 7 as follows:**

[0019]

The invention ~~in claim 2~~ is characterized in that, in the design method for industrial products ~~described in claim 1~~, the industrial product is a machine including a mechanism in which a mechanical element having a mass moves and a trajectory of motion of the mechanical

element is designed by using the three-dimensional curve (referred to as the three-dimensional clothoid curve).

**Amend paragraph [0020] beginning on page 7 as follows:**

[0020]

The invention ~~in claim 3~~ is characterized in that, in the design method for industrial products ~~described in claim 2~~, the machine is a screw device including a mechanism in which a ball as the mechanical element moves, the screw device comprises a screw shaft having an outer surface on which a spiral rolling element rolling groove is formed, a nut having an inner surface on which a load rolling element rolling groove is formed so as to be opposed to the rolling element rolling groove and a regression path is formed to connect a one end and the other end of the load rolling element rolling groove, and a plurality of rolling elements disposed between the rolling element rolling groove of the screw shaft and the load rolling element rolling groove of the nut and disposed in the regression path, and the regression path of the screw device is designed by using the three-dimensional curve (reefed to as the three-dimensional clothoid curve).

**Amend paragraph [0021] beginning on page 8 as follows:**

[0021]

The invention ~~in claim 4~~ is characterized in that, in the design method for industrial products ~~described in any one of claims 1 to 3~~, the three-dimensional clothoid curve is defined by the following expressions.

**Amend paragraph [0022] beginning on page 9 as follows:**

[0022]

The invention ~~in claim 5~~ is characterized in that, in the design method for industrial products ~~described in claim 4~~, a plurality of spatial points are specified in a three-dimensional coordinate and these spatial points are interpolated by using the three-dimensional clothoid curve, whereby the shape of the industrial product is designed.

**Amend paragraph [0023] beginning on page 10 as follows:**

[0023]

The invention ~~in claim 6~~ is characterized in that, in the design method for industrial products ~~described in claim 5~~, seven parameters $a_0$, $a_1$, $a_2$, $b_0$, $b_1$, $b_2$ and h of the three-dimensional clothoid segments are calculated so that, between a one three-dimensional clothoid segment (a unit curve consisting of a group of curves produced on the interpolation) and the next three-dimensional clothoid segment (a unit curve consisting of a group of curves produced on the interpolation), positions, tangential directions, normal directions, and curvatures of both the one

and next three-dimensional clothoid segments are made continuous to each other, respectively, at the plurality of spatial points.

**Amend paragraph [0024] beginning on page 10 as follows:**

[0024]

The invention ~~in claim 7~~ is characterized in that, in the design method for industrial products ~~described in claim 6~~, the seven parameters $a_0$, $a_1$, $a_2$, $b_0$, $b_1$, $b_2$ and h of the three-dimensional clothoid segments are calculated by making the number of conditional expressions produced by mutual addition to be made between conditional expressions concerning the tangential directions, the normal directions and the curvatures at both the starting point and the end point and further conditional expressions allowing the positions, the tangential directions, the normal directions, and the curvatures of both the one and next three-dimensional clothoid segments to be made continuous to each other, respectively, at the plurality of spatial points agree with the unknowns of the seven parameters $a_0$, $a_1$, $a_2$, $b_0$, $b_1$, $b_2$ and h of the three-dimensional clothoid segments, whereby the conditional expressions is made agree with the unknowns in terms of number thereof, by specifying the tangential directions, the normal directions and the curvatures at the stating point and the and point among the plurality of spatial points and additionally inserting objective points being interpolated between the spatial points which have been specified in advance.

**Amend paragraph [0025] beginning on page 11 as follows:**

[0025]

The invention ~~in claim 8~~ is an industrial product designed by using the design method for industrial products ~~according to any one of claims 1 to 7~~.

**Amend paragraph [0026] beginning on page 11 as follows:**

[0026]

The invention ~~in claim 9~~, which is for designing the shape of an industrial product, is a program enabling a computer to operate as means to design the shape of the industrial product by using a three-dimensional curve (referred to as a three-dimensional clothoid curve) in which each of a pitch angle and a yaw angle in a tangential direction is given by a quadratic expression of a curve length or a curve length variable.

**Amend paragraph [0027] beginning on page 11 as follows:**

[0027]

The invention ~~in claim 10~~, which is for designing the shape of an industrial product, is a computer-readable recording medium recording thereon a program enabling a computer to operate as means to design the shape of the industrial product by using a three-dimensional curve (referred to as a three-dimensional clothoid curve) in which each of a pitch angle and a yaw angle in a tangential direction is given by a quadratic expression of a curve length or a curve length variable.

**Amend paragraph [0046] beginning on page 22 as follows:**

[0046]

A. Design method for industrial products by using the clothoid curve:

In the ~~inventions according to claims 1-10~~ claimed invention, by using the three-dimensional clothoid curve, the motion of a mechanical element can be designed so that a trajectory of the motion becomes smooth. Designing the trajectory in this way makes it possible that machines move in a dynamically unforced condition, cause no deterioration in their functions due to motion errors, and have less damage in their trajectories.